

plh



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,049	12/19/2001	Quentin P. Herr	12-1224	2984

27572 7590 06/17/2004

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

DANG, KHANH NMN

ART UNIT	PAPER NUMBER
----------	--------------

2111

DATE MAILED: 06/17/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,049

Applicant(s)

HERR, QUENTIN P.

Examiner

Khanh Dang

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2 and 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7, 12, 13, 15, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Tam.

At the outset, it is noted that similar claims will be grouped together to avoid repetition.

As broadly drafted, these claims do not define any structure that differs from Tam.

With regard to claim 1, Tam discloses a crossbar switch comprising: a crossbar matrix (also crossbar matrix, shown generally at Fig. 1) that includes n input rows (IN) of cross-points (point) and m output columns (OUT) of cross-points (point); and n decoders (91, Fig. 2) connected to said n input rows, wherein each of said n rows includes a single serial address (output of decoder 61 with address supplied from address line 66) between said decoder (91) and said crosspoints (switch points). Note that "row" and "column" are only relative terms. Depending on the viewing position of

the crosspoint matrix, the row will become column and vice versa. See also col. 3, line 66 to column 4, line 6).

With regard to claim 2, each of said n rows includes a single shift input (90) and a single data input (on bus 48a).

With regard to claims 3 and 21, it is clear from at least Figs. 1 and 2 of Tam that the serial address and data enter said address input and said data input in parallel.

With regard to claims 7 and 15, it is clear that in the crossbar switch of Tam, the decoders (91) convert a binary address input into a serial address, since address data supplied to the input of decoder 91 is in binary form.

With regard to claim 12, see discussion regarding claims 1-3 above.

With regard to claim 13, it is inherent that, as in any conventional computer architecture. Data transfer always involve a 'clock.'

With regard to claim 19, see discussion regarding to claims 1 and 7 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 10, 17, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tam.


Tam, as discussed above, discloses the claimed invention except for the use of superconducting material for conductors (claim 9), e.g., rapid single-flux-quantum (RSFQ) logic (claims 10, 17, and 22). However, such conducting material, e.g., rapid single-flux-quantum (RSFQ) logic is old and well-known as evidenced by Suzuoki et al. (cited under relevant art). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use conducting material, e.g., rapid single-flux-quantum (RSFQ), since the Examiner takes Official Notice that conducting material, e.g., rapid single-flux-quantum (RSFQ) is old and well-know, and selecting such material for Tam is merely a matter of design choice.

Allowable Subject Matter

Claims 4-6, 8, 11, 14, 16, 18, 20, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

U.S. Patent Nos. 5,345,114 to Ma et al., 6,526,491 to Suzuoki et al., and 5,559,970 to Sharma are cited as relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.



Khanh Dang
Primary Examiner